

AMENDMENTS TO THE CLAIMS

Please substitute the following pending claims 71-87 and 103-105 as replacement claims for the previously-pending claims. In this Amendment, claim 71 has been amended.

Claims 1-70 (canceled)

71. (Currently amended) A prosthetic material comprising:
a scaffold having interconnecting, uniformly shaped pores; and
an ingrowth matrix within the pores, wherein the ingrowth matrix comprises a concentration gradient of a material, and is adapted to promote ingrowth of tissue in the scaffold and wherein varying concentrations within the ingrowth matrix are designed to perform specific functions.
72. (original) The prosthetic material of Claim 71 wherein the material in the concentration gradient comprises a synthetic material.
73. (original) The prosthetic material of Claim 72 wherein the synthetic material comprises a hydrogel.
74. (original) The prosthetic material of Claim 71 wherein the material in the concentration gradient comprises a protein.
75. (original) The prosthetic material of Claim 74 wherein the protein is selected from the group consisting of fibrin, collagen, glycosaminoglycan, and combinations thereof.
76. (original) The prosthetic material of Claim 71 wherein the material in the concentration gradient comprises a protein and a synthetic material.
77. (original) The prosthetic material of Claim 71 wherein the material in the concentration gradient comprises a growth factor.

78. (original) The prosthetic material of Claim 71 wherein the material in the concentration gradient comprises a peptide.

79. (original) The prosthetic material of Claim 71 wherein the concentration gradient comprises a delivered gene.

80. (original) The prosthetic material of Claim 71 wherein the concentration gradient comprises a fibrin matrix.

81. (original) The prosthetic material of Claim 71 wherein the concentration gradient comprises a polyethylene glycol matrix.

82. (original) The prosthetic material of Claim 71 further comprising interconnecting, helically oriented channels within the scaffold.

83. (original) The prosthetic material of Claim 71 wherein substantially all of the pores have diameters within 300 μm of one another.

84. (previously presented) The prosthetic material of Claim 71 wherein the pores have the shape of a sphere.

85. (original) The prosthetic material of Claim 71 comprising a vascular graft.

86. (original) The prosthetic material of Claim 71 comprising a sewing ring.

87. (original) The prosthetic material of Claim 71 comprising a synthetic heart valve.

Claims 88-102 canceled.

103. (previously presented) The prosthetic material of claim 71, wherein one material is present throughout the ingrowth matrix of each pore in various concentrations between a core of the ingrowth matrix and an outermost surface of the ingrowth matrix.

104. (previously presented) The prosthetic material of claim 71, wherein the same concentration gradient is present in each pore.

105. (previously presented) The prosthetic material of claim 71, wherein the ingrowth matrix is designed to allow multiple ingrowth options within each pore.